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Technological intrusion and communicative renewal: The case of two rural solar farm developments in the UK

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ABSTRACT

In this paper I present findings and insights from an empirical study of two case study solar farm developments from rural areas of the South West, UK. Drawing on a Habermasian theoretical frame, I examine local resident narratives that emerged through the local public sphere and how these formed discursive meanings that provided shared background social norms for residents towards the solar farm developments. The paper begins by operationalising Habermas's theoretical ideas for empirical research and situating the research within existing literature. The theoretical and methodological sections are followed by the examination of three local narratives that emerged: idealised rural land use, farming and income generation, and money making and the pursuit of profit. Such narratives are considered in view of public opportunities for robust dialogue and debate to judge the normative democratic character of the solar farm developments. The paper concludes that the community development offered significantly more discursive space for debate than the commercial development and increased the developments' overall democratic legitimacy. It is maintained that such a Habermasian theoretical frame adapted for empirical analysis is valuable for normatively assessing democratic processes which are needed in view of conceptually weak accounts of 'energy democracy'.

1. Introduction

In the opening presentation of the Rural Energy Transitions session at the Royal Geographical Society (RGS) Annual International Conference 2018, Naumann and Rudolph made their proposal for a three-way conceptualisation of rural energy transitions based on location, contestation and emancipation. These three concepts resonated strongly for those of us present researching energy developments in rural settings. Nevertheless, the specific meaning of these 'abstract nouns' remains in question at this early stage of explanation. With detailed exposition, Naunmann and Rudolph's conceptual frame could offer new insights on the low carbon transition in rural settings beyond those generated from existing conceptual frameworks (for example: Devine-Wright, 2005, Smith et al., 2005, Meadowcroft, 2009 Haggett, 2010, Devine-Wright, 2011a, Gailing, 2016, Geels et al., 2016, Jenkins et al., 2016). Their efforts to begin a conceptual dialogue to address the under-theorised space of rural energy transitions is welcomed and this paper looks to contribute to the shared aim of more theoretically informed research. Accordingly, it is not my intention to critically examine Naumann and Rudolph's early proposed conceptual frame. Instead, I present findings from my own research that are supported by a Habermasian frame to highlight what this socially and politically informed theoretical approach can offer our understanding of rural energy transitions. I suggest that a Habermasian frame allows for local social norms and discourse to be better understood whilst also providing a normative appraisal for judging how democratic renewable energy developments are. Furthermore, in view of the emerging interest in 'energy democracy', I suggest that a Habermasian conceptual frame can also provide necessary guidance to support research in this under-theorised field.

The research findings presented here are from two solar farm development case studies in the South West, UK. The two research case studies were carried out over an 18-month period (summer 2017 - winter 2018) and were selected largely due to their business/ownership model; one being led by a 'commercial' developer and the other a partnership between a 'community energy group' and landowner. The theoretical frame that guides the research is drawn from Habermasian social and democratic theory (Habermas, 1989 [German publication 1962], 1984 [1981], 1987 [1981], 1996 [1992]). When employed for research in Western advanced capitalist democratic societies, this theoretical approach generates tough questions about how decisions are made (Habermas, 1984; Roderick, 1986) and how decision-making

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forums operate (for example, Habermas, 1989), rather than looking at the detailed agreements and outcomes (See the discussion on *Procedure or Substance?* in Gutmann and Thompson, 2004: 23–26). Such ideas have become increasingly important as the inclusion of popular interest and public knowledge is now taken as necessary for decisions to be regarded as 'legitimate' in Western democracies. Thus, legitimacy in this form is associated with procedural requirements rather than outcomes. As Dryzek notes, *"increasingly, democratic legitimacy came to be seen in terms of the ability or opportunity to participate in effective deliberation on the part of those subject to collective decision-making"* (Dryzek, 2000: 1).

I adopt this theoretical frame for guiding the research for two reasons. Firstly, the socio-political dynamics have been under examined in energy transition literature (For example, Wolsink, 2000, Mcclymont and O'hare, 2008, Devine-Wright, 2009, Devine-Wright, 2011b, Wolsink, 2012, Devine-Wright, 2013, Devine-Wright, 2013, Aas et el. 2014, Barnett et al., 2012). Whilst this literature draws out important insights on place attachment, NIMBYism, public acceptance, public beliefs, acceptance and trust, it largely does not provide detailed political understandings of the development process involved in low carbon transitions. There are exceptions, however, (for example, Barry and Ellis in Devine-Wright, 2011a; Chilvers and Longhurst, 2016; Krzywoszynska and Buckley et al., 2016; MacArthur, 2016). Following in this vein, the research findings presented in this paper work towards extending this politically sensitive subfield within rural settings. I also maintain that politically informed research is needed now more than ever to identify oppressive processes and, contrastingly, practices possessing emancipatory potential within the low carbon transition. What's more, with public concerns and interests in Climate Change peaking,[1] politically informed analysis is crucial to offer meaningful responses for those outside of academia.

Secondly, I am concerned that the emerging term 'energy democracy' (see Szulecki, 2018 for conceptual clarification and critique) needs further conceptual weight to avoid it becoming an 'empty signifier'[2] and losing normative explanatory value. Habermasian social and political theory in this regard offers a democratic theoretical frame that retains a thin normative position that enables judgements to be made on how democratic a renewable energy development has or has not been in practice. It is my suggestion that situating empirical research into the low carbon transition within the context of more substantial democratic theory will also generate new insights on transitions theory within both rural and urban settings.

Within the low carbon energy research space, this democratic procedural focus has been considered by several researchers to date (for example, Sovacool et al., 2017; Yenneti and Day, 2015; Ottinger et al., 2014), although in most cases the engagement with Habermas's works is rather thin (Yenneti and Day, 2015 is an exception). Working with a Habermasian conceptual frame can seem daunting as his ideas present a high-level theoretical framework that appears detached from empirical reality. Nevertheless, I follow those who engage in the translation of this theoretical framework for empirical research (see, for example, Forester in Morgan, 1983; Forester, 1986; Jacobson and Storey, 2006; Cukier et al., 2009). This translation is not straightforward as significant theoretical baggage is associated with this approach.

2. Theoretical frame and argument statement

Habermas' earlier works are the primary theoretical reference for this empirical study (Habermas, 1984, 1987, 1989). At its most basic, a Habermasian approach asks for distinctions to be made between instrumental and non-instrumental ('communicative') forms of reason to identify motives (Habermas, 1984). Communicative rationality associated with communicative action (and the 'lifeworld') is a form of reason employed by rational actors in developing mutual understanding when engaged in discourse (Habermas in Outhwaite, 1996). Individuals pursue communicative acts to develop understanding of the world that supports their subjectivity through acknowledging the intersubjective foundations on which their subjectivity is based (Habermas, 1984). Instrumental or 'strategic' rationality (associated with the 'system'[3]) and its equivalent forms of social action refer to communication that aims to achieve a strategically desired outcome, be that a change of someone's perspective or an agreement to act in accordance with someone's wishes (Habermas, 1984). By identifying different forms of motivation, it is possible to judge the intentions of actions and communications and, from this fundamental distinction, build understanding of the types of discourses generated and how communicating members of the public generate shared opinions on matters of mutual concern (Habermas in Calhourn, 1992). For example, what are the common local narratives that frame public understanding and truth claims?

Formal decision-making processes are drawn into the Habermasian approach (see Baxter, 2011: 60), including the quasi-judicial planning process where the state makes a judgement on behalf of, but with underlying support from, the demos (Rehg in Habermas, 1996). This formal decision-making process is often the subject of analysis in Habermasian inspired research and has been readily adopted in planning literature under the 'participatory planning' banner (see, for example, Innes, 1995; Healey, 1997). This focus on planning has also been carried over into decentralised energy research (see, for a general overview, Haggett, 2009). In this paper, however, the focus of analysis is largely on the emerging narratives that framed the local communities' response to the developments and falls outside the formal planning process. Thus, I draw more from Habermas' earlier works on undistorted communication and the public sphere - or 'local public sphere' - as I refer to it here. The concept of the public sphere is at its most general: "the public of private individuals who join in debate of issues bearing on state authority" (Calhoun in Calhoun, 1992: 7). It is more specific than the broader concept of 'civil society'. Although Habermas' analysis considers changes in the form of civil society as a component of the analysis, the focus remains on forms and spaces of communication, and the generation of shared public interests within a local public sphere that coincides with the solar farm area of interest (see the following section). The adoption of the Habermasian concept of the local public sphere combined with deliberation and consensus formation also raise empirical questions relating to how active and critically formed opinions are. Opinions and the social norms that this generated overtime, according to Habermas, can be produced through discursive (active) will (opinion) formation or generated through the consumption of popular culture or traditional norms leading to 'mere opinion' (Habermas, 1987: 346).

Deliberation is a key concept for Habermas and his followers that has been used to label the theoretical position itself (see, for example, Bohman and Rehg, 1997; Gutmann and Thompson, 2004; Dryzek, 2010). An assessment is made of the deliberative potential of different places and public sphere organisations and how mutual understanding and agreed consensus permeates the development process. Deliberation involves the questioning and answering that takes place through sustained dialogue between people on matters of mutual concern. As communicators, individuals develop shared understanding that "meets the conditions of rationally motivated assent to the content of an

[1] I write this at the time of the 2019 Extinction Rebellion October uprising.

[2] An empty signifier is a term that has indeterminate meanings that can be co-opted for justifying various positions. As a floating signifier, 'energy democracy' provides limited explanatory potential and can be used for instrumental justification. See, for example, Hegemonic and Socialist Strategy by Laclau and Mouffe (1985).

[3] The lifeworld/system distinction represents a two-level conception of society that sees the increasing dissociation ('uncoupling') of the system from the lifeworld in modern Western societies (Habermas, 1984, 1987). For an example of a higher-level analysis of media coverage and energy policy that draws on this distinction see Świątkiewicz-Mośny and Wagner (2012).

utterance … The speech act of one person succeeds only if the other accepts the offer contained in it by taking (however implicitly) a "yes" or "no" position on a validity claim" (Habemas, 1984: 287). In other words, the establishment of intersubjectivity consensus through speech acts provides the basis for truth claims that are either accepted or rejected, which in turn leads to normatively defensible claims that can direct social actions. It is important to consider deliberation and consensus formation as the low carbon transition is made up of endless decisions of shared public concern that play out in village halls, parish and local council organisations across the country. The nature of these decisions is important. If dialogue is sustained, open and inclusive, it can support a more robust decision-making process that can claim greater democratic legitimacy.

Conflict is also important and can be considered in parallel. Conflict is associated with social pathologies that Habermas identifies with the colonising tendency of the lifeworld by the system (Habermas, 1987). Such pathologies occur when the cultural reproduction, social integration and socialisation functions of the lifeworld become hollowed out and replaced by a bounding instrumental rationality that spreads through colonising systemic mechanisms that are drawn to the "vortex of economic growth" (Habermas, 1987: 367). Habermas differentiates between several pathologies that occur due to colonisation, which include loss of meaning, anomie and alienation (Habermas, 1987). These pathologies occur if the distorted structural components of culture, society or the individual are not resolved and, in certain cases, can lead to crises brought on by 'systemic disequilibria' (Habermas, 1987: 385). Conflicts and social pathologies are important empirical concerns, as these help to identify the distorting effects of instrumental rationality, which undermines deliberative processes of consensus formation; instrumental rationality that supports someone's material gain over another person's, leads to a breakdown in debate on mutual concerns. Thus, conflict and social pathologies may indicate that instrumental reason had subjugated communicative rationality and undermined social relations and decision-making fora. Power and money associated with instrumental reason are therefore essential components of any socio-political analysis (Habermas, 1987).

One of the benefits of adopting a Habermasian informed approach is that it forms a disinterested high-level conceptual frame. Such a conceptual frame avoids a drive for prescriptive detail, which in turn leads to an overbearing framework that may lead to the exclusion of important empirical realities. I suggest that this frame allows for a broad conceptual horizon that helps to capture the full range of social relations, actions and meanings involved in the decision-making process of energy developments that are part of the rural energy transition. I also raise the point in view of Naumann and Rudolph's tentative proposal for a three-part conceptual frame based on location, contestation and emancipation. Although it is too early to comment, the strength of a disinterested high-level conceptual frame may or may not be shared.

Before considering research findings it is necessary to briefly outline a few methodological details.

3. Methodological note

The research considered here consists of two case studies that involved multiple trips and stays in the case study areas over an 18-month period (summer 2017 - winter 2018). The two case studies were selected largely due to the 'development type', referring to the business and ownership model adopted: Creacombe being a 'community case' where ownership and revenue were to some extent retained in the local area, and Nancrossa being a 'commercial case' where ownership is remote and revenue flows away from the local area.[4]

The data collected from the Creacombe case and considered here consists of 19 interviews with local residents, advocates and professionals; over 50 discussions[5] with local residents; and field notes from attending the public engagement exercise carried out by Yealm Community Energy (YCE) at the Yealmpton Agricultural Show in 2017 and 2018, and the YCE AGM in 2018. The data collected from the Nancrossa case consists of 13 interviews with local residents and professionals, over 25 discussions with local residents, and field notes of visiting several public places where discussions on the solar farm took place.

Adopting a Habermasian democratic theoretical frame raises many questions around the decision-making process, but it also requires the exchange of ideas and perspectives. As such, an internal conceptual drive is generated to recognise, consider and represent local voice as a valuable product of research. But this begs the question: whose voice should be considered and represented? The Habermasian view of democracy suggests that all those affected by a decision should (in an ideal-typified account) be included (Bohman and Rehg, 2014). Whilst a claim can be made that everyone is affected by mitigating the effects of climate change, those who live near to the development have an additional claim to be more 'affected' by sustaining a view of the development (see Perlaviciute and Steg, 2014). Subsequently, local voice was prioritised and sought, leading to a logic of 'community of place' rather than 'community of interest' (see, for example, Bauwens and Devine-Wright, 2018) being considered when establishing boundaries for the data collection geographical area.

These 'local voices' coalesced into emerging narratives that fused entrenched local social norms and opinions that had been formed through active dialogue. It is these narratives that are largely considered in this paper via a selective extraction of voice that encapsulate the logics and foundational claims at work within a discourse. An iterative process of triangulation occurred through sustained on the ground interaction, observation and talking with many people over the 18-month period. The emerging narratives could then be cross-checked, re-considered, and examined from multiple perspectives. Searching for emerging narratives to understand discourse as a form of social analysis is compatible with Habermas' social and democratic theory as it tries to establish the link between democratic legitimacy and the process of opinion formation. As Habermas himself notes, *"the deliberative paradigm offers as its main empirical point of reference a democratic process, which is supposed to generate legitimacy through a procedure of opinion and will formation"* (Habermas, 2006). It is this approach that I follow here.

4. Findings and reflections: emerging local narratives

In this section I consider three related emerging narratives recorded in my exchanges with local residents, including: idealised rural land use, farming and income generation, and money making and the pursuit of profit. The three narratives are interconnected and each builds on the previous. In view of each I reflect on the logics inherent within the narrative and what these imply in view of the Habermasian conceptual approach. In particular, questions around the activation of social norms to generate critical rational opinions are examined, or whether instrumental logics dominated. It is through this empirical-theoretical exchange that I hope to demonstrate the overall value of the approach for understanding the rural low carbon transition at a local level.

4.1. Rural land use and the deep connection to agriculture and farming

A principal narrative shared across both case studies centred on land use and farming and the change in land use from farming to energy generation. In both cases, an idealised association between rural land

[4] Detailed ownership arrangements are not discussed in this paper.

[5] 'Discussions' were treated differently from 'interviews' as they tended to be less structured and were only recorded as notes. Interviews were audio recorded and transcribed. All were included in thematic analysis carried out using NVivo software.

and agricultural farming was recorded and there was a strong sense that the 'productive use of land' would be undermined if the land was used solely for energy generation. A resident in Creacombe concisely summarised this narrative accordingly;

> *"And of course, one wants to avoid destroying good quality farming land."* (Creacombe resident 1)

The use of land for farming was taken as unquestionable common sense; a basic social norm that was accepted by all those I spoke with. Part of the narrative was the importance of soil grade and the overall fertility of the land, and it was on these grounds that many who supported the solar farm tended to justify their opinion as rational. Again, as the same resident remarked:

> *"I quite agree if they're good quality fields, you've got cattle or whatever, sheep or whatever doing well on them or they're very productive in grain or other crops, then probably not. But there are places, I think, where a solar farm is appropriate. That's where they are more marginal lands and they're not visually intrusive as I already said."* (Creacombe resident 1)

Those who opposed the solar farm developments also drew from this narrative to justify their opinion – seeing energy generation as a form of industrialisation and loss of agricultural land.

> *"I still object on the fact that we have wonderful agricultural land around here. And I think it's hard to justify giving up land, whether you can see it or not, to put in industry. You're better putting those solar panels as an industrial site somewhere. So, I object to the way it looks, but more to the lack of use of the land. It's wrong."* (Creacombe resident 2)

These responses internalised background presuppositions of land use that were framed by generalised notions of agriculture and farming that were widely shared. An active public opinion associated with this agricultural social norm concerned with land being 'productively used' was recorded. Where supporters and opposers differed was in their interpretation of this norm in the specific context; the linguistic activation of the background agricultural land use social norm led to differing opinions on the productive use of agricultural land. Those who viewed the land as marginal were unfazed by the developments, while those who viewed the land as productive tended to see the solar development as inappropriate rural land use. The difference between these two opinion positions and interpretation of social norms prevented the formation of a consensus.

To diminish objections in both cases the developers proposed that livestock would continue to graze under the panels and thereby remain in semi-agricultural use. In so doing, the developer was making validity claims that drew on communicatively generated local understanding. I put the proposal of mixed grazing and energy use to a couple who opposed the Creacombe planning application and they responded negatively - viewing this justification as a façade and therefore strategically motivated.

> "*I: Sheep would graze underneath the solar farm?*
>
> *R2: Oh, they all say that!*
>
> *R3: I've spoken to a farmer on that and he's said that's rubbish. They can only put them out there for a short period of time because the grass doesn't grow underneath it. So, who do you believe?"* (Creacombe resident 2 and 3)

This form of justification seen through the Habermasian lens can be treated as either a strategic manoeuvre to justify the development through linking back to lifeworld social norms, or as a communicative response to try to form a compromise position that could form a fragile consensus. For reasons that will be further discussed below, in the Creacombe case the latter appeared true with the developer working with the landowner and other interested public organisations to maximise the positive agriculturally sensitive outcomes.[6] In the Nancrossa case, the former appeared true with the justification of the development drawing on mixed land use to help legitimate unbridled strategic intent. The fact that the same narrative could be drawn upon in both cases for different motives is important to recognise as it highlights the variation of decision-making in project developments.

Delving deeper into this land use narrative and following the logic to its foundations brought to light conflicting views on farming – one 'future' and the other 'historically' oriented. Those who opposed the development adopted an abstracted account of farming that could be typecast as historic and traditional. The following account of a conversation between a supporter of the Creacombe development with someone who opposed the scheme, captures this historic oriented idealised notion of farming:

> *"'It's going to ruin the landscape'. They didn't believe that you could continue to graze sheep underneath solar panels …. There was a very old woman there who was in a wheelchair; she must have been in her 90s. They said, 'This lady has farmed all her life, and she'll tell you there's absolutely no way that grass will grow under solar panels; there's no way that sheep will graze under there'. It's just impossible."* (Creacombe resident 4)

Continuing their response, the farmer who supported the solar farm development maintained that many of those who objected appeared unaware of the current economic realities of farming:

> "*I see their argument from a simplistic level, but I don't think that they really look into it much further, and I think it's not viable, really, to farm unless you are farming in ways that are not really that good for the environment or the soil. I think you need to look longer term than the immediate, and there's got to be some changes, hasn't there? But people aren't necessarily happy to think about them."* (Creacombe resident 4)

The response registered by both sides included assumptions of how farming should and should not be carried out. For the farmer (Creacombe resident 4), the reality of making money from traditional farming involved intensive farming practices that would lead to environmental degradation. Their argument was premised on the notion of maintaining soil quality and biodiversity – aims which they suggested conflicted with a view of farming held by those opposing the solar farm. The farmer (resident 4) had a solar farm on their own farm that diversified the farms' income stream which, they claimed, enabled for a more sensitive approach to farming (they were in the process of transferring to organic farm status). Taking more direct aim at the idealised notion of farming, Creacombe resident 4 suggested that generally people wanted to see farming in the countryside but were unwilling to pay an economically viable price for produce.

> *"You have to diversify to make a living on a farm, but people want to keep the countryside, and they want people to be farming, but they're not supporting farming. So also, the way that people shop and buy food also needs to change. That's a bigger topic and it doesn't relate."* (Creacombe resident 4)

Although the farmer suggested that the issue *"doesn't relate"*, the reason for situating the solar farm on farm land was drawn from this justification for diversifying farm income, which in turn can be seen in the context of global food systems, intensive farming practices and the corresponding economics. Taking the contrasting view were those who opposed the scheme on the basis of farming for food production, as

[6] These included ecological enhancement, community benefits and landscape design decisions to name a few.

opposed to making money from the inappropriate use of agricultural land for energy generation.

> *"I mean, if it's a matter of life and death and it's a matter of … the government says we've got to have it, then you think: 'Fine, alright. If the government says you've got to have it … ' But when there are so many alternatives and you need to look at the wider picture, like I said, with air miles for food and all the rest of it, the government is saying we need to be more and more self-sufficient as a nation, so you think: 'Well, why are we making a few people rich on the back of solar panels that could go somewhere else?'"* (Creacombe resident 2)

Within these narratives on appropriate rural land use a tension emerged over specific farming practices and economics which remained unresolved between supporters and those in opposition. Creacombe resident 4 viewed those who opposed the scheme as being unaware of the realities of contemporary farming. This was in stark contrast to residents who saw solar farms as a way for farmers to make windfall profits. The land use narratives and associated opinions that had formed towards the solar farm remained, however, largely siloed. Dialogue between the two was absent leaving little evidence of deliberation taking place between the opposing groups. A possible reason for this was that the differences in opinion were linked to the wider social norm of land use rather than being narrowly focused on the solar farm in isolation. Accordingly, opinions on the solar farm were connected to deep rooted farming practices. The position of supporters and opposers was made more sensitive by this link back to communicative, meaning giving, social norms.

Nevertheless, these shared clusters of agricultural social norms that provided the 'horizon of the lifeworld' (Habermas, 1984: 335–337) at the historic point in time, also maintained deliberative potential. By tracing back from the division between those in support and those in opposition to a deeper shared social terrain, it *could* be possible to identify further places of accordance to begin to work through dialogue to shared understanding and possibly consensus.

To stress the value of employing a Habermasian conceptual frame, I suggest it allows for such common narratives (based on communicative or instrumental logics) to be examined in and of themselves. There is no prior substantive categorisation set by the conceptual framework which ensures the analysis remains open to localised meanings and discourses. As above, the social norm of agricultural farming land use acts as communicative understanding that in some way establishes shared intersubjective meaning between local residents (Habermas, 1984). Differences in what this means in practice for those who support or those who oppose the development are apparent in emerging active narratives. These different narratives could lead to the testing of truth claims (Habermas, 1984) if those with opposing views were brought into a discursive exchange (Habermas, 1987).

The same basic shared clustering of rural social norms was also found in Nancrossa and is apparent in the emerging narrative on profiting from land use change, to which I now turn.

4.2. Farming and profiting from land use change

In the Nancrossa case study a similar agricultural land use narrative was recorded, although in this instance profit-making and the associated instrumental reason was more pronounced. I encountered a range of disgruntled responses to the use of farm land for the solar arrays, but the response from Nancrossa resident 1 captured the link between profit and land use.

> *"I think there are too many farmers around that are in favour of it because they're going to make a lot of money out of it. But I think the parish council felt the same as what I did, that by having these solar panels the farmers aren't going to have the land to bring up milking cows or grow vegetables. Another ten or 15 years, Cornwall is going to be in a sad state of affairs."* (Nancrossa resident 1)

Nancrossa resident 2 also drew on this narrative and saw the change in land as part of a malicious attempt to build new houses.

> *"They take the land; you can't do anything with it. The most you can do is put sheep on it. Ten years' time, what happens then? If the battery leaks, if the ground gets infected, they can't use it as arable land again, so what are they going to do? Whack up a thousand odd houses, which is exactly what they wanted to do in the first place. A back-door in. That I disagree with strongly."* (Nancrossa resident 2)

A local government planning official characterised the land in Cornwall (region in the South West, UK) as 'under-developed' and therefore ripe for development.

> *"This is huge for Cornwall. We do have various issues, but I think a lot of the issues come about because actually, the land is quite under developed, as opposed to a city area, so there is lots of scope for development. There has been quite a bit of action, and the locals, obviously, want to retain and keep the beauty of Cornwall as it is."* (Cornwall Planning official)

The idea that the locals wanted to keep the land untouched due to its landscape beauty was, however, not reflected in discussions with residents. Although visual intrusion was a concern for many, the primary concern was that the land should, again, remain 'agriculturally productive'. As recorded by the following local resident response:

> *"When people started wanting, because of the generous feed-in subsidies, to put them on farmland, people objected because it was good quality farmland. If the farmland can still be used underneath the panels, that's another win-win situation. But if you've got to go around and cut the grass down because it doesn't allow you to graze, and geese, I believe people use, as an alternative to sheep, it seems so terribly wasteful."* (Nancrossa resident 3)

The instrumental logic identified by residents when a developer took the farmland completely out of agricultural use jarred with local agricultural social norms. When solar farms were developed without mixed use, the instrumental motive was viewed as too forceful. Here Habermas' observations on the dislocation of the system from the lifeworld are important (Habermas, 1987). Whilst residents accepted that land would be used for instrumental aims, they only did so if an agricultural connection remained which established a vital link to meaning giving communicative norms drawn from the lifeworld (Habermas, 1984). Thus, although both solar farms were instrumentally motivated to some degree, land use change that completely broke down the connection to shared lifeworld meaning giving norms alienated those residents who had formed an opinion of opposition. What was taken and understood as 'productive use of land' by residents could not be treated as exclusively instrumentally motivated; and when it appeared to residents that this development was, this form of instrumentalisation led to alienation and discontent as the 'colonisation' of lifeworld background understanding was too pronounced. As expressed through the Habermasian lens, the local resident accounts presented above capture discomfort with agricultural land being used for the sole purpose of profit; losing land permanently to private ownership in the case of home building; or following the narrative of productivity - the under-utilisation of the land for the sole use of energy production.

4.3. Instrumental logics, money and the pursuit of profit

> *"It's an abomination, but good to have a community fund!"* (Yealmpton Agricultural Show 2018 attendee)

Extending the previous two narratives, when comparing the Nancrossa case with the Creacombe case the main differences appeared to be generated by the business/ownership models adopted. These different ownership arrangements generated distinct responses around the direction and use of profit. As already noted, in both cases the generation

of money, and specifically where profits were being directed, were important to residents. In the case of Nancrossa, the related narratives were general, centred around farmers or private companies profiting from the solar farms and many felt that it was impossible to prevent this development due to the corporate interest involved. For example:

> *"Going to go up whatever you do."* (Nancrossa resident 4)

> *"Think once they've made their mind up then all done. Money talks."* (Nancrossa resident 5)

In Nancrossa, this narrative of a lack of control due to powerful financial interests was joined and reinforced by another narrative on payments made to individuals for their support. Although no hard evidence to validate such claims was found, as these claims were made by several individuals it appeared likely that some residents received a one-off payment of around £2500 if they signed an agreement not to object to the planning application. If such payments were made, a clear individual instrumental benefit can be seen to have been in operation. In which case, the individual receiving the payment renders their democratic rights to object in return of individual financial gain.

To consider the above in Habermasian terms draws attention to the alienation of local residents from the planning process – the quasi-judicial decision-making forum where deliberative exchanges are more likely due to the professionalisation of argument and systematic justification of decisions (Forester in Forester, 1986; Habermas, 1996). Many of the residents reported a sense of powerlessness due to the instrumental logics that emerged through subsystems of money and power (Habermas, 1987) represented by the corporate developers who sought only to profit from the development. Here the potential for deliberation within the formal planning process appeared limited. The distortion of the planning process through payments to individuals, reduced the legitimacy of the formal decision-making process and left a sense of distortion (corruption) in the eyes of many who opposed the development. This distortion prevented places for debate – such as the parish council meetings[7] – acting as a deliberative forums, which in turn led to a further breakdown in the public decision-making process. Thus, democratic legitimacy associated with robust procedural space for dialogue was not apparent and any claim of 'energy democracy' would be misplaced.

As a commercial development, the Nancrossa development's raison d'etre was to make money - instrumental logics went unquestioned. Whilst in the Creacombe case, the issue of directing profit raised more nuanced views. As a community energy development, the YCE directors had consciously and publicly wrestled with the use of project generated profit and where it would be appropriate to spend it. An example of grappling with the instrumental motives was seen in discussion with one of YCE's directors. They were keen to consider the use of profit for generating long term revenues for public goods and services along with increased agency that the income would provide for the local communities in which it would be spent.

> *"It totally changes what you do. … it means that you've got that pot of money and you've just no idea what might be required even two years down the line, let alone 25 years. And don't forget this, and this is the real kicker for me: if you can make it work in the near term, what you're looking at is something with a theoretical 25-year life. The money is paid off in 20 years. Those last five years are very, very lucrative. To the extent of not a few tens of £1000s but £1 million. That's something which can be then invested in a trust which could then carry on making you £20,000 a year, ad infinitum."* (YCE director)

The director also stressed the importance of retaining a local use of the profit from the sale of electricity and the potential for a long-term revenue stream.

> *"Why would you want it necessarily to be going offshore or into the city of London? If you can do it locally, that would be absolutely wonderful. So yes, it's an additional benefit. All of these things are additional benefits. … The main thing is to make it work, because for me at any rate if you can make it work for the short distance, this long-term goal is the game-changer that we're seeking."* (YCE director)

By 'game-changer', the director, along with other directors, saw the generation of funds as comparable with parish council funds, enabling public services and goods to be paid for. Such an amount of unrestricted money would significantly affect the public economy of the parishes and the civil society organisations from these areas that were in receipt of these funds. In so doing, also potentially revitalising civic organisations that help sustain an active public sphere, which could lead to local communicative renewal.

What was apparent from comparing the two cases was the difference in public space made available by the developers to consider these instrumental profit motives. In the case of Creacombe, these considerations were presented in public through the AGM, public exhibition and engagement activities. The directors of YCE were willing to examine and discuss the point of making money, how that money might be spent, and what types of organisations should be able to apply to the Community Benefits Fund for grants. In short, they opened space for debate and scrutiny within the local public sphere on these instrumental benefits to ensure that they would be collectively enjoyed. Whilst in the Nancrossa case, such discussions were largely removed from public, remaining behind a 'corporate veil'. Whispers of bribes were reported through local hearsay and the decision to direct the community benefits one-off payment to the local Football and Cricket Club generated tensions.

Outside of the formal planning process, deliberative forums were established (in Creacombe but not in Nancrossa) to give space for the questioning of underlying logics. This discursive exchange process ensured that validity claims were questioned (Habermas, 1984) in the case of Creacombe or at the very least, the opportunity for questioning was given. This space for deliberative exchange ensured YCE's decisions could be regarded as more democratically legitimate (Habermas, 1996) than Nancrossa's as those with concerns could raise them if they chose to through the different public forums enacted by YCE.

Furthermore, tracing the ownership of the Nancrossa solar farm was challenging and none of the residents I spoke with were aware of who owned the solar farm at the time of research. Based on interviews and available online sources at the time, it appeared that the Special Purpose Vehicle (SPV) company has changed ownership several times through the development process and is currently (2019) owned by Blue Elephant Energy, a German investment company that buys operational energy infrastructure. Profit was therefore directed to the company and its shareholders. Contrasting with the Creacombe solar farm, no revenue stream was directed to the local area. Here, again, the instrumental logics that are inherent within the ownership structures limited the place for debate and discussion. SPVs tend to be used to minimise risks for parent companies and prevent there being a direct link between shareholders and invested assets. This separation only further limits the space for dialogue whilst concentrating corporate power. Indeed, the procedural differences inherent in the ownership structures were arguably more important in the development process than localised future economic gains. Thus, local voice and involvement in decision-making – via YCE's public engagement events and its AGM in the Creacombe case, and the removal of through the opaque corporate decision structures in the Nancrossa case – were critical in establishing the underlying logics and aims of the developers, which in turn set the direction where to direct profit. In sum, the communication channels that were opened or closed by the development model were precursors to any substantive

[7] Accounts of explicit public discontent directed towards the developers at a parish council meeting between the developer and the council appeared to reflect a general level of distrust towards the developer that partly undermined the potential for deliberation.

economic decisions and emancipatory or oppressive outcomes.

5. Discussion

The Habermasian frame adopted to inform this research remains high level, thin and porous, allowing for many valuable insights to be drawn into analysis including: the activation of social norms, the development of time limited consensus, opinions and their formation in the local public sphere, the distortive nature of instrumental rationality, and the alienation that is experienced when system processes undermine decision-making forums. Several additional insights that expand on the conceptual insights touched on throughout the paper are now briefly discussed.

First, the low carbon energy transition has led/is leading to technological intrusion in rural areas that, for many years, have not experienced decentralised energy generation.[8] The siting decisions associated with this energy infrastructure leads to the instrumentalisation of local public spheres reflecting the higher-level sociological trend of the colonisation of the lifeworld by the system, which sees the instrumental logics begin to overwhelm communicative ones (Habermas, 1987). The scale of energy infrastructure and the investment decisions involved are important as the development and ownership models may be able to mediate some of this dislocation depending on how open they are to local voice and participation. Nevertheless, the overriding motive for the development of this infrastructure in view of a 'community of place' remains instrumental. Following Dryzek there is, however, a view of communicative fight-back against instrumental reason where certain forms of organisation may provide greater space for communicative renewal, or as Dryzek puts it: "I seek not to defend the lifeworld against further 'colonisation' by the system but to conduct a counteroffensive by taking discursive rationality to the heart of the 'enemy's' domain" (Dryzek, 1990: 20). Accordingly, the Habermasian lens allows the consideration of these different development models in view of a theoretical procedural account of democratic decision-making that allows normative judgements to be made.

Second, the type of organisation involved in the low carbon transition may have bearing on the types of opportunities to participate as a member of the public. The spaces for deliberation that are established by an organisation can significantly affect the democratic legitimacy of the decision-making process if they allow for the questioning of validity claims and avoid distorting the formal decision-making process represented by the planning process. Therefore, careful analysis of the ownership and development models is required that brings into question decision-making opportunities, essentially asking: Who gets to decide? How do they decide? And why do they reach that decision?

Third, the interaction between the formal decision-making (planning process) and local civil society groups and organisations involved in the development is a matter of interest as it represents the democratic nourishment of individuals acting as 'authors' of law (Habermas, 1996: 449, Thompson, 2008). Such actions can vitalise the planning process through activating a 'democratic *sittlichkeit*' (ethic) (Habermas, 1996: 461) that is generated through the discursive exchanges that take place in the public sphere. Thus, a broader view of 'energy democracy' can be seen that treats these infrastructure developments as another matter of public concern that requires the mutual search for shared interests through deliberative exchange and dialogue. In short, it is a matter of democratic decision-making, not 'energy democracy' per se.

It is hoped that Naumann and Rudolph's conceptual frame identifies further issues related to the rural energy transition that may also help to politicise social science research in this area. Although it is likely that differences between conceptual frames will be apparent, I support their attempts to establish a discursive space for seriously considering the conceptual and theoretical framing in this field. What's more, a refocusing towards the rural is necessary if further decarbonisation is required and the technological intrusion becomes more pronounced; be that offshore/onshore wind farms, solar farms or biodigesters.

6. Conclusions and policy implications

The three example narratives of local voice that emerged from the empirical research suggest that land, land use and the deep-rooted link between agriculture and rural life established foundational social norms and public opinions in both case studies that had significant bearing on the development process. By drawing attention to these social norms and opinions, the Habermaisan frame allows for the local discursive 'terms of debate' to be considered and how this affected the public response to the solar farm. The conceptual frame also provides normative principles that facilitate judgements on the democratic character of the decision-making processes to be made. The empirical research insights support the overall Habermasian thesis that the more concentrated instrumental logics are the more alienating these would be for those whose communicative background meaning and understanding is threatened. Accordingly, Nancrossa, the commercial development, appeared overwhelmed by instrumental logics that lead to a strong rejection by those who had not received economic payments. Whilst such instrumental logics were present in the Creacombe case, which represented a more community-oriented development, the more open and engaging ownership arrangements along with a stronger community ethos ensured that these instrumental logics remained in check. Democratically speaking, Creacombe was the more normatively defensible of the two.

The paper's aim was to present an example use of a Habermasian frame to interpret empirical research findings to support a more theoretically robust analysis of democratic decision-making within a rural energy transition context. Although the Habermasian theory remains abstract, it offers useful markers for interpretation and analysis by forming a background interpretative map that helps to draw out deeper meaning of socio-political spheres. The framework remains porous and focused on high-level societal trends and spaces that give significant manoeuvre for contextual specificity. The theory is detailed and there are other dimensions that can be considered, including; the micro-level play of instrumental reason within the planning process; the detailed ownership arrangements that support or frustrate public debate; and how certain local voices are more or less pronounced in the local public sphere. As an early conceptual exposition, however, it is hoped that this will enter into constructive dialogue with other conceptual offerings for further clarification on the pertinent social and political issues facing rural energy transitions.

Policy implications are clear. If policy makers are to take note, the point to stress from this paper is that the planning process cannot be regarded as separate from the wider democratic public sphere and the types of organisations involved in developments in rural energy transition. In view of the above case studies, the planning process did not generate strong democratic legitimacy in isolation. Rather, the organisational structures and public engagement beyond the formal decision-making process provided democratic nourishment in the case of Creacombe which was sorely lacking in the case of Nancrossa.

[8] The title denotes a basic fact about the nature of the change represented by the development of renewable energy in rural locations. In many rural locations, the low carbon transition is not experienced as a *transition* from fossil fuel powered energy plant within the locale to a low carbon energy plant. The transition is experienced as the *introduction* of energy generating infrastructure into an area. This introduction can be framed positively or negatively, however, it does not alter the fact that a material/technological intrusion into the landscape occurs with any development. An appreciation of this basic characteristic of change is required to begin to understand the social response and following narratives that emerge. Failing to do so does not account for the proverbial 'elephant in the landscape'.

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